

(PCT Article 36 and Rule 70)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/052895

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1, 2 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-3 received by this Authority on 02.04.2005 with letter of 01.04.2005
- nos.* _____ received by this Authority on _____
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☒ the claims, nos. 4-6
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. II

Priority

1. ☒ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
- ☒ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).
- ☐ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2. ☐ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement		
	Novelty (N)	Claims <u>1, 2</u>	YES
		Claims <u>3</u>	NO
	Inventive step (IS)	Claims <u>1-3</u>	YES
		Claims <u>1-3</u>	NO
	Industrial applicability (IA)	Claims <u>1-3</u>	YES
		Claims <u>1-3</u>	NO
2.	Citations and explanations (Rule 70.7)		
	Reference is made to the following documents:		
	D1: DE 100 56 180 A1 (ASOTA GES. M.B.H., LINZ) 29 May 2002 (2002-05-29).		
	1). The amendments submitted with the letter of 1 April 2005 appear not to introduce any substantive matter which, contrary to PCT Article 34(2) (b), would go beyond the disclosure in the international application as filed.		
	2). Independent claim 1		
	2.1) Observations under PCT Article 5 and 6		
	The application does not meet the requirements of PCT Article 5 and 6 because claim 1 is not clear and its subject matter cannot be carried out by a person skilled in the art.		
	The problem to be solved by the invention is that of improving the binding of the pile fibres into the support layer (see application, page 2,		

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	<p>paragraph 3). To solve this technical problem the invention provides for a fusible intermediate layer to be intensively bonded to the backing fibres of the pile and the support layer by water needling, and blended. Thereafter the carpet is to undergo heat treatment so as to fuse the intermediate layer blended with the backing fibres.</p> <p>When a thermofusible powder or a short-staple fusible fibre is used as the intermediate layer, an improved blending of the powder or the short-staple fusible fibre with the support layer by hydraulic needling is obtained, since the smaller the fusible "particles" are (that is to say, a powder or short-staple fibre), the more easily the fusible "particles" can penetrate the support layer and blend with the other fibres.</p> <p>However, it is not clear to the Examining Authority how an intensive bonding and blending of the intermediate layer is possible by hydraulic needling if <u>a thermofusible film is used as the intermediate layer</u>, as specified in independent claim 1. In the opinion of the Examining Authority, it is technically impossible to blend a thermofusible film with a support layer by hydraulic needling.</p> <p>Consequently, the subject matter of claim 1 is unclear (PCT Article 6) and cannot be carried out by a person skilled in the art (PCT Article 5).</p>

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Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2.2 **Novelty (PCT Article 33(2)) and inventive step (PCT Article 33(3))**

The present application appears to satisfy the PCT requirements for novelty and inventive step (PCT Article 33(2)).

Document D1, which is considered the closest prior art, discloses a method for the continuous stabilization of a pile carpet or tufted carpet having a view side and a rearward support layer into which the pile-forming yarn is introduced and in which it has to be anchored (paragraphs 1-3 and 9), wherein (see examples):

- i) first a short-staple fusible fibre is applied to the back of the support layer provided with the pile fibre, as intermediate layer ("intermediate fibre fleeces 1A and 1B", which consist of 50% H10 **40 mm melt bonding fibre** made by the company Asota) and lastly a non-woven is applied to produce a carpet backing ("textile backing 2A-C and 3A-C"), and
- ii) the two are firmly connected to the back of the support layer by means of hydrodynamic water needling (paragraph 28), and
- iii) the carpet is subjected to a heat treatment so as to melt the fusible fibres (paragraph 30).

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	<p>The applicant's attention is drawn in particular to the fact that the expression "short-staple fusible fibre" is not defined in the present application. Consequently, the Examining Authority is of the opinion that the 40 mm H10 fusible fibres used in document D1 can be considered short-staple fusible fibres.</p> <p>The subject matter of claim 1 differs from the method disclosed in document D1 in that the back of the support layer is subjected to water needling <u>twice</u>, whereas in document D1 the number of hydraulic entanglement passes is between 1 and 3 (see document D1, paragraph 28).</p> <p>Consequently, the subject matter of claim 1 appears to satisfy the PCT requirements for novelty (PCT Article 33(2)).</p> <p>The problem to be solved by the present invention is therefore understood to be that ensuring that tufted carpets are sufficiently stabilized.</p> <p>The solution proposed in claim 1 of the present application, that is to say, subjecting the back of the support layer to two water needling passes, cannot be considered inventive, for the following reasons:</p> <p>It is obvious to a person skilled in the art that two-fold water needling creates a firmer and more stable pile carpet or tufted carpet than single</p>

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	<p>water needling. No unexpected technical effect can be derived from this.</p> <p>In this regard the applicant's attention is drawn to the fact that to a person skilled in the art proceeding from document D1, paragraph 28, it would be straightforward to arrive at the teaching according to the invention.</p> <p>Document D1, paragraph 28, indicates to a person skilled in the art that the process parameters of the hydraulic entanglement, for example the water pressure and <u>the number of passes</u>, are chosen in accordance with the desired properties of the end product. Document D1 teaches that the number of passes can be between 1 and 3.</p> <p>Consequently, the main claim does not satisfy the PCT requirements for inventive step (PCT Article 33(3)).</p> <p>3). Independent claim 3</p> <p>The objections under PCT Article 5 and 6 (see "2.1 Observations under PCT Article 5 and 6") also apply to product claim 3.</p> <p>Since it is not clear from the finished end product whether the back of the support layer was subjected to water needling twice or only once, the textile web disclosed in document D1 is prejudicial to the novelty of claim 3 (PCT Article</p>

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	33(2)) .
4) .	Dependent claim 2
	<p>Dependent claim 2 contains no features which, combined with the features of claim 1, to which it refers, meet the PCT requirements for inventive step, since the subject matter of claim 2 is obvious to a person skilled in the art and does not result in an unexpected technical effect.</p>
5) .	Industrial applicability
	<p>The industrial applicability of claims 1 and 3-6 would appear to be obvious (PCT Article 33(4)).</p>
6) .	Contrary to PCT Rule 5.1(a)(ii), the description
	<p>does not cite document D1 or indicate the relevant prior art disclosed therein.</p>